

REMARKS

Claims 1-7 and 9-11 are pending in the above application. By the above amendment, claim 8 has been cancelled, and claim 11 has been added.

The Office Action dated July 25, 2006, has been received and carefully reviewed. In that Office Action, claim 8 was rejected under 35 U.S.C. 102(e) as being anticipated by Saito, claims 1-4, 6, 7 and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Yonekura, and claims 9 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Yoshisato. By the above amendment, claim 9 has been rewritten in independent form, and claim 8 has been cancelled. Reconsideration and allowance of claims 1-7 and 9-11 is respectfully requested in view of the following remarks.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Yonekura. As acknowledged in the Office Action, Saito does not include a frequency multiplication circuit; however, the Office Action asserts that it would have been obvious to add a frequency multiplication circuit to Saito to "reduce power consumption." It is respectfully submitted that Yonekura does not teach that a frequency multiplier should be added to a voltage controlled oscillator in order to reduce power consumption. Rather, Yonekura discloses that the presence of a frequency multiplier circuit causes problems, namely, the degradation of the carrier to noise ratio which decreases "by an amount proportional to $20 \log n$ where n represents the multiplication factor." Yonekura therefore teaches benefits of keeping a multiplication factor low.

In a circuit where a frequency multiplier circuit is needed, Yonekura teaches an arrangement for reducing the problems caused by such a circuit. Saito does not have a frequency multiplier circuit and thus has no problem to be addressed by the invention of Yonekura. There is no reason to add a frequency multiplier circuit to Saito based on Yonekura because this addition would degrade the carrier to noise ratio as taught by Yonekura. While Yonekura teaches how to mitigate such problems, Saito does not appear to suffer from such problems in the first place. Therefore, one skilled in the art would have no reason to provide Saito with a multiplier circuit because, according to Yonekura, this would degrade the performance of Saito. Because a motivation for modifying Saito in view of Yonekura has not been provided, it is

submitted that a *prima facie* case of obviousness has not been presented, and claim 1 is submitted to be allowable over Saito and Yonekura for at least this reason.

Moreover, by the above amendment, claim 1 has been revised to require a tuning device for selecting a frequency of a radio-frequency to receive and that the controller control a level switcher based directly on the selected frequency. Saito does not show or suggest controlling a level switcher based directly on a selected frequency as now claimed. In addition, the Office Action argued that Saito's "frequency selection circuit 11" is a circuit for selecting a frequency for receiving a radio-frequency signal. It is respectfully submitted that Saito's frequency selection circuit 11 is a circuit for selecting a frequency for the reference oscillator, not for selecting a frequency for receiving a radio-frequency signal. In other words, Saito's circuit 11 selects a frequency of a local signal and not a frequency of the radio-frequency signal to be received. For these reasons, as well, claim 1 further distinguishes over Saito and Yonekura.

Claims 2 and 4-7 depend from claim 1 and are submitted to be allowable for at least the same reasons as claim 1.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Yonekura. Claim 3 requires a frequency multiplier circuit and a controller for controlling a level switcher based directly on a selected frequency and is submitted to be allowable over Saito and Yonekura for at least the same reasons as claim 1. In addition, claim 3 as amended, requires a controller that outputs a first control signal for controlling a voltage controlled oscillator and that outputs a second control signal for controlling a level switcher. Saito's detector 6 appears to output only one signal that affects amplitude correction circuit 12. Therefore, even if a motivation for combining Saito and Yonekura were provided, it is respectfully submitted that claim 3 as amended patentably distinguishes over Saito and Yonekura.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Yonekura and further in view of Pugel. As discussed above in connection with claim 1, it is respectfully submitted that a proper motivation for combining Saito and Yonekura has not been provided. The rejection of claim 5, which is based in part on a combination of Saito and Yonekura, is therefore respectfully traversed for the same reasons provided above in connection with claim 1.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Yonekura. Claim 9 has been rewritten in independent form to include the limitations of claim 8. Claim 9 requires a method of controlling a radio-frequency receiver that includes steps of selecting a frequency for receiving a radio-frequency signal, generating a local signal using a local signal generator and multiplying the voltage controlled oscillator signal by a multiplier, providing a mixer for mixing a received radio-frequency signal with the local signal to convert the radio-frequency signal into an intermediate-frequency signal or baseband signal and controlling an output signal level of the local signal generator based directly on the selected frequency. Saito does not show or suggest the use of a multiplier. For the reasons provided above in connection with claim 1, a motivation for adding Yonekura's frequency multiplier circuit to Saito has not been provided and therefore a *prima facie* case of obviousness based on these references has not been presented. Claim 9 is therefore submitted to be allowable over Saito in view of Yonekura.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Yoshisato. The Office Action acknowledges that Saito does not disclose a method of controlling a radio frequency receiver that includes a step of multiplying a voltage controlled oscillator signal by a multiplier. Yoshisato is cited to show a satellite reception system that includes a voltage controlled oscillator connected to a multiplier. It is respectfully submitted that a proper motivation for modifying Saito in view of Yoshisato has not been provided, that a *prima facie* case of obviousness has not been presented, and that claim 9 is therefore allowable over the applied references.

The reason provided for multiplying an output of Saito's voltage controlled oscillator is to "reduce power consumption." However, it is respectfully submitted that neither Sato nor Yoshisato discusses the relationship between power consumption and the use of a multiplier. Yoshisato discloses a frequency multiplier but does not explain why it is used. Therefore, it is respectfully submitted that one skilled in the art would have no reason to believe that multiplying the frequency of the output of Saito's voltage controlled oscillator by a multiplier would be useful or desirable. If the motivation is alleged to come from Yonekura, which is not used in this rejection, the rejection is respectfully traversed for the same reasons provided in connection with

claim 1, namely that a proper motivation for combining Saito and Yonekura has not been provided. Claim 9 is submitted to be allowable over the references of record for at least this reason.

Claim 10 depends from claim 9 and is submitted to be allowable for at least the same reasons as claim 9.

New claim 11 is also submitted to be allowable over the references of record. Claim 11 requires a method of controlling a radio-frequency receiver that involves selecting a frequency for receiving a radio-frequency signal, generating a local signal using a local signal generator and providing a mixer for mixing a received radio-frequency signal with the local signal to convert the radio-frequency signal into an intermediate-frequency signal or baseband signal. The method also involves providing a level switching circuit for controlling the output level of the local signal generator independently of the frequency of a received radio frequency signal, and controlling the level switching circuit to set a first output level of the local signal generator when a first frequency is selected for reception and to set a second output level of the local signal generator different from the first output level when a second frequency is selected for reception.

In applying the Saito reference to (now-cancelled) claim 8, the Office Action argued that a relationship existed between the output of Saito's frequency selection circuit 11 and the output of Saito's detector 6. However, the output of Saito's amplitude level correction circuit is also dependent on the frequency of a received signal. Claim 11 requires a level switching circuit for controlling the output level of the local signal generator independently of the frequency of a received radio frequency signal, which is not shown or suggested by Sato or the other references of record. Claim 11 is submitted to distinguish over Saito and the other references of record for at least this reason.

CONCLUSION

Each issue raised in the Office Action dated July 25, 2006, has been addressed, and it is believed that claims 1-7, and 9-11 are in condition for allowance. Wherefore, reconsideration and allowance of these claims is earnestly solicited.

Application No. 09/941,558
Amendment dated September 25, 2006
After Final Office Action of July 25, 2006

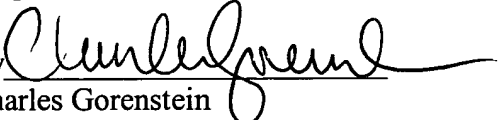
Docket No.: 2936-0134P

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Scott Wakeman (Reg. No. 37,750) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: September 25, 2006

Respectfully submitted,

By 

Charles Gorenstein

Registration No.: 29,271

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant